

Abstract

A method for stimulating perfusion and minimizing postischemic reperfusion injury. A patient is selected having compromised perfusion in a tissue or in the microcirculation of an organ. An ultrasound transducer is applied to a location near the tissue. The transducer is
5 activated to initiate exposure of the tissue to ultrasound at a frequency of 100 KHz to 2.5 MHz for 0.5 to 15 minutes duration, wherein local vasodilatation is stimulated. In certain cases, the methods further include a step of confirming that local vasodilatation is stimulated by measuring enhancement in perfusion. Ultrasound devices are also described for carrying out the methods. The devices and methods can be used to enhance myocardial perfusion, cerebral perfusion, and
10 perfusion of transplanted tissues.

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